

Amendments to the Claims

1. (Previously presented) A sputtering target made by a process including casting having a target surface with the following characteristics:
- a) substantially homogenous composition at any location;
 - b) substantial absence of pores, voids, inclusions and other casting defects;
 - c) an absence of detectable precipitates;
 - d) an average grain size of less than 1 μ m; and
 - e) substantially uniform structure and texture at any location.
2. (Previously presented) A sputtering target according to claim 1 comprising one or more of Al, Ti, Cu, Ta, Ni, Mo, Au, Ag, and Pt.
3. (Original) A sputtering target according to claim 1 comprising Al and about 0.5 wt.% Cu.

Claims 4-44 (Cancelled).

45. (Previously presented) The sputtering target of claim 1 comprising an alloy which includes at least one of Al, Ti, Cu, Ta, Ni, Mo, Au, Ag and Pt.
46. (Previously presented) The sputtering target of claim 1 comprising Al.
47. (Previously presented) The sputtering target of claim 1 comprising Ti.

48. (Previously presented) The sputtering target of claim 1 comprising Cu.
49. (Previously presented) The sputtering target of claim 1 comprising Ta.
50. (Previously presented) The sputtering target of claim 1 comprising Ni.
51. (Previously presented) The sputtering target of claim 1 comprising Mo.
52. (Previously presented) The sputtering target of claim 1 comprising Au.
53. (Previously presented) The sputtering target of claim 1 comprising Ag.
54. (Previously presented) The sputtering target of claim 1 comprising Pt.
55. (Currently amended) A sputtering target formed from a cast material and comprising:
 - a yield strength of greater than 50 mega ~~pascal~~ Pascal (MP), and an ultimate tensile strength of greater than 125 MP;
 - a substantial absence of pores, voids and inclusions; and
 - an average grain size of less than about 1 μm , the target having an annealed upper surface portion and a remaining portion that is un-annealed.

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56. (Previously presented) The sputtering target of claim 55 comprising one or more of Al, Ti, Cu, Ta, Ni, Mo, Au, Ag, and Pt.

57. (Previously presented) The sputtering target of claim 55 comprising an alloy which includes at least one of Al, Ti, Cu, Ta, Ni, Mo, Au, Ag and Pt.

58. (Previously presented) The sputtering target of claim 55 further comprising a substantial absence of precipitates.

59. (Previously presented) The sputtering target of claim 55 further comprising a substantially uniform structure and texture at any location.

60. (Previously presented) The sputtering target of claim 55 further comprising a substantially homogeneous composition at any location.

61. (Currently amended) A copper sputtering target ~~comprising copper~~, formed by a process including casting, and having a target surface with the following characteristics:

- a) substantially homogenous composition at any location;
- b) substantial absence of pores, voids, inclusions and other casting defects;
- c) an absence of detectable precipitates;
- d) an average grain size less than about 1 μ m; and
- e) substantially uniform structure and texture at any location.

62. (Previously presented) The sputtering target of claim 1 further comprising one or more of Al, Au, and Ag.

63. (Previously presented) The sputtering target of claim 62 comprising Al.

64. (Previously presented) The sputtering target of claim 62 comprising Au.

65. (Previously presented) The sputtering target of claim 62 comprising Ag.

66. (Previously presented) A sputtering target formed from a cast copper material and comprising:

a yield strength of greater than 50 mega Pascal (MP), and an ultimate tensile strength of greater than 125 MP;

a substantial absence of pores, voids and inclusions; and

an average grain size of less than about 1 μm .

67. (Previously presented) The sputtering target of claim 66 wherein the copper material comprises pure copper.

68. (Previously presented) The sputtering target of claim 66 comprising one or more of Al, Au, and Ag.

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69. (Previously presented) The sputtering target of claim 66 wherein the copper material comprises a copper alloy having one or more of the elements selected from the group consisting of Al, Au, and Ag.

70. (Previously presented) The sputtering target of claim 66 further comprising a substantial absence of precipitates.

71. (Previously presented) The sputtering target of claim 66 further comprising a substantially uniform structure and texture at any location.

72. (Previously presented) The sputtering target of claim 66 further comprising a substantially homogeneous composition at any location.

73. (Previously presented) The sputtering target of claim 55 wherein both the yield strength and the ultimate tensile strength are greater than 125 MP.

74. (Previously presented) The sputtering target of claim 55 wherein both the yield strength and the ultimate tensile strength are greater than 150 MP.

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